AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS:

1. (Currently Amended) A inter-symbol-interference (ISI) coder comprising:

   a mapper operational to map at least one sequence of input symbols <u>selected from a lattice</u> into a set of multiple sequences of extended symbols and to select the extended symbols from a<u>the</u> same grid<u>lattice</u> associated with the input symbols to yield a same minimum distance; and

   a linear ISI filter operational to generate coded output symbols in response to the set of multiple sequences of extended symbols.

2. (Original) The ISI coder according to claim 1, wherein the linear ISI filter is selected from the group consisting of an finite impulse response (FIR) filter, and an infinite impulse response (IIR) filter.

3. (Original) The ISI coder according to claim 1, wherein the linear ISI filter is configured such that its convolution with a channel impulse response yields a desired ISI generating pattern.

4. (Cancelled).

5. (Original) The ISI coder according to claim 1, wherein the mapper has a transform that is invertible such that no two input sequences are mapped into the same sequence of extended symbols.

2

6. (Cancelled).

7. (Currently Amended) A method of channel coding, the method comprising:

   mapping at least one input symbol sequence selected from a lattice into a set of multiple sequences of extended symbols;

   generating coded output symbols in response to the set of multiple sequences of extended symbols; and

   selecting the extended symbols from a the same grid lattice associated with the input symbols to yield a same minimum distance.

8. (Cancelled).

9. (Previously Presented) The method according to claim 7, further comprising

   convolving a linear filter with an associated channel impulse response to yield a desired inter-symbol-interference (ISI) generating pattern.

10. (Cancelled).

3